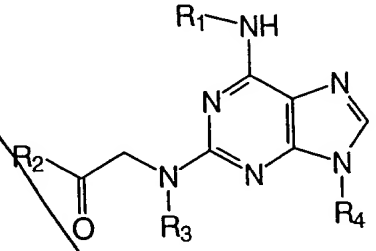
What is claimed:

1. A compound of formula 1:



wherein

R_1 is alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl, substituted with 0-3 substituents selected from lower alkyl, halo, hydroxy, lower alkoxy, amino, lower alkyl-amino, and nitro;

R_2 is hydroxy, amino, or lower alkoxy;

R_3 is H, lower alkyl, lower acyl, lower alkoxy-acyl, or amino-acyl;

R_4 is H or lower alkyl;

and pharmaceutically acceptable salts and esters thereof.

2. The compound of claim 1, wherein R_4 is methyl.

3. The compound of claim 2, wherein R_2 is amino.

4. The compound of claim 3, wherein R_1 is pyridylmethyl.

5. The compound of claim 4, wherein R_3 is propanoyl.

6. The compound of claim 4, wherein R_3 is 3-methylbutanoyl.

7. The compound of claim 4, wherein R_3 is butanoyl.

8. The compound of claim 4, wherein R_3 is H.

9. The compound of claim 3, wherein R_1 is 4-(trifluoromethyl)benzyl.

10. The compound of claim 9, wherein R_3 is methoxyacetyl.

11. The compound of claim 9, wherein R_3 is H.

12. The compound of claim 9, wherein R_3 is aminoacetyl.

13. The compound of claim 9, wherein R_3 is propanoyl.

14. The compound of claim 9, wherein R_3 is 3-methylbutanoyl.

15. The compound of claim 3, wherein R_1 is 4-fluorobenzyl.

16. The compound of claim 15, wherein R_3 is methoxyacetyl.

17. The compound of claim 15, wherein R_3 is H.

18. The compound of claim 3, wherein R_1 is 4-methoxybenzyl and R_3 is H.

19. The compound of claim 3, wherein R_1 is cyclohexyl, and R_3 is H.

20. The compound of claim 3, wherein R_1 is 3-methylbutyl.

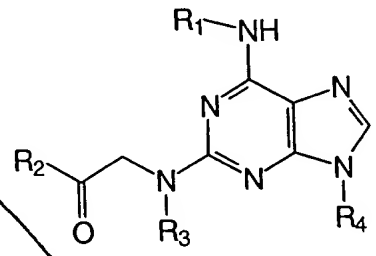
21. The compound of claim 20, wherein R_3 is methoxyacetyl.

22. The compound of claim 20, wherein R_3 is 3-aminopropanoyl.

23. The compound of claim 3, wherein R_1 is 4-chlorobenzyl, and R_3 is butanoyl.

24. A pharmaceutical composition, comprising:

a compound of formula 1:



wherein

R_1 is alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl, substituted with 0-3 substituents selected from lower alkyl, halo, hydroxy, lower alkoxy, amino, lower alkyl-amino, and nitro;

R_2 is hydroxy, amino, or lower alkoxy;

R_3 is H, lower alkyl, lower acyl, lower alkoxy-acyl, or amino-acyl;

R_4 is H or lower alkyl;

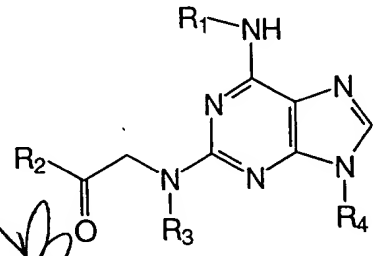
or a pharmaceutically acceptable salts and esters thereof; and

a pharmaceutically acceptable excipient.

25. A method of inhibiting GSK3, comprising:

providing active GSK3; and

contacting said GSK3 with a compound of formula 1:



wherein

R_1 is alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl, substituted with 0-3 substituents selected from lower alkyl, halo, hydroxy, lower alkoxy, amino, lower alkyl-amino, and nitro;

R_2 is hydroxy, amino, or lower alkoxy;

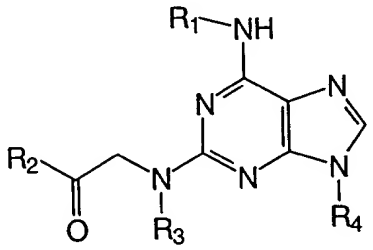
R_3 is H, lower alkyl, lower acyl, lower alkoxy-acyl, or amino-acyl;

R_4 is H or lower alkyl;

and pharmaceutically acceptable salts and esters thereof.

26. A method for treating a disorder mediated by GSK3, comprising:

providing an effective amount of a compound of formula 1:



wherein

R_1 is alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl, substituted with 0-3 substituents selected from lower alkyl, halo, hydroxy, lower alkoxy, amino, lower alkyl-amino, and nitro;

R_2 is hydroxy, amino, or lower alkoxy;

R_3 is H, lower alkyl, lower acyl, lower alkoxy-acyl, or amino-acyl;

R_4 is H or lower alkyl;

or a pharmaceutically acceptable salt or ester thereof; and administering said composition to a subject having a disorder mediated by GSK3.

27. The method of claim 26, wherein said disorder is selected from the group consisting of diabetes and Alzheimer's disease.